Idaho 8th Grade Direct Math Assessment

DISTRICT | BUILDING

I.D. NUMBER

FIRST NAME

LAST NAME

SEX | RACE | F/R

LEP | LAA | MIG | TIA | GAT | NOD

SNA | SAC | SAD | SAA | SAR | SAL | SAM

STUDENTS DO NOT WRITE IN THIS AREA

ROUND 1	ROUND 2
TABLE _____	TABLE _____
READER_____	READER_____

FINAL

It is important that you explain and show how you solved the problems on this assessment. If you use a calculator, show how you set up the math.

❶ Manuel, Sam and five of their friends are going to order pizza for dinner. A pizza costs $4.99 plus $0.75 per topping.

a. Find the cost of each pizza they ordered and fill in the appropriate spaces in the chart below. Do not include sales tax.

Toppings	Pizza 1	Pizza 2	Pizza 3	Pizza 4	Pizza 5
Olives					X
Mushrooms					X
Pineapple				X	
Sausage		X			X
Pepperoni		X	X		X
Canadian Bacon		X		X	X
Extra Cheese	X				X
Pizza Cost - without tax					$9.49

X = topping was ordered

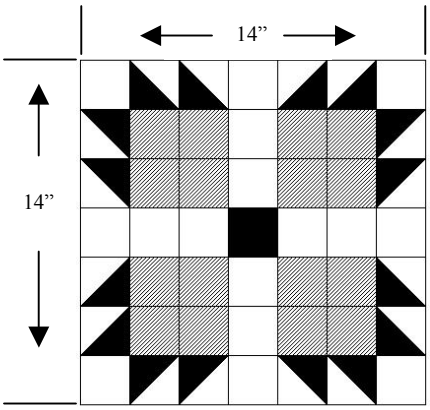
b. What is the **total** cost of the five pizzas, including a 5% sales tax? *Show or explain how you found your answer.*

c. Each pizza has 8 slices. Sam plans to eat two slices from <u>each</u> pizza. What fraction of all the pizzas does he plan to eat? What percent is this? *Show or explain how you found your answer.*

d. Each person pays for his share of the total cost based on the amount of pizza he eats. How much should Sam pay? *Show or explain how you found your answer.*

Read problems 2, 3, 4 and 5 on the next few pages. Select three problems to answer. Answer ALL of the parts of the three problems you select to answer. Cross out the one problem that you do not choose to answer.

❷ The quilt block pictured below is called a "Bear's Paw." It is made by sewing together squares and triangles. Some pieces are black, while others are white or gray. Use the block to answer the questions.



a. If the completed "Bear's Paw" block is 14 inches by 14 inches, what is the area that is shaded black? *Show or explain how you found your answer.*

b. What fraction of the total "Bear's Paw" block is shaded black? *Show or explain how you found your answer.*

c. Juanita needs to cut 2 ½ inch by 2 ½ inch squares from a piece of black material that is 44 inches wide and 36 inches long. What is the maximum number of squares she can cut from this piece of material? *Show or explain how you found your answer.*

❸ Students were surveyed to find out how many pets their families owned.

a. Use the given data to complete the frequency table.

PETS PER FAMILY

3,1, 2, 1, 4, 2, 1, 2, 1, 2, 0, 3, 1, 2, 2, 3, 2, 2, 4, 1, 1, 1, 1, 0, 1, 3

Frequency Table for Pets per Family		
Pets per Family	Tally	Frequency

b. Graph or plot this data in the space provided below. Be sure to include appropriate identifying labels.

c. How many families have 2 or more pets? *Show or explain how you found your answer.*

d. What is the mean number of pets per family? What is the mode? *Show or explain how you found your answer.*

❹ Ron, Leora and Susan all work at the same restaurant. They get paid an hourly wage as well as any tips they receive. They each make different wages based on their work experience.

a. If Ron's hourly wage is $5.00 more than Leora's wage, and Susan's wage is $10.00 less than twice Leora's wage, write an algebraic expression for each of their wages. Be sure to explain your variables.

Ron: **Leora:** **Susan:**

b. If Leora's hourly wage is $8.00, what are Ron's and Susan's wages? *Show or explain how you found your answer.*

c. If, in one week, Ron worked for 32 hours and got $56.25 in tips, how much did he earn? *Show or explain how you found your answer.*

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❺ Roger works for the Department of Fish and Game. To discover how healthy a pond is, Roger needs an estimate of the number of fish in the pond. He asked his son Mark for help.

a. They captured 8 trout, 6 bass and 3 catfish. They tagged and released the fish. They later captured 60 fish. Five of the fish in the second capture had tags. About how many fish are in the pond? *Show or explain how you found your answer.*

b. If you go fishing in this pond, what is the probability that the first fish you catch will be a trout? *Show or explain how you found your answer.*

c. How many of **each** type of fish are there likely to be in the pond if the ratio of trout to bass to catfish in the pond is the same as in the first capture? *Show or explain how you found your answer.*